

Mineral Industry Surveys

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PRECIOUS METALS IN JANUARY 1998

U.S. mines produced 27,800 kilograms (kg) of gold and 133,000 kg of silver in January 1998. Production of silver was down by 14% in Nevada.

Gold

Domestic.—Pinson Mining Co. laid off 19 processing employees at its mine north of Winnemucca, NV, and suspended milling operations because of low gold prices and improved heap-leach recoveries. Mining will continue, but ore will be processed by heap leach alone. The Pinson Mine, which produced 1,319 kg of gold in 1997, is jointly owned by Homestake Mining Co. and Barrick Gold Corp. (Platt's Metals Week, 1998f).

Amax Gold Inc. (59% owned by Cyprus Amax Minerals Corp.) and Kinross Gold Corp. agreed to merge their operations and will become the fifth largest gold miner in North America. After the merger, the new company, Kinross Gold, will have an annual production of 37,000 kg of gold and annually save about \$25 million in interest by eliminating \$335 million of long-term debt and an estimated \$5 million in corporate and exploration costs (Northern Miner, 1998).

International.—The Australian gold industry has received a pledge of assistance by its Federal Government. A round-table meeting between government and industry representatives led to an agreement not to cap the diesel fuel rebate. This announcement comes a year after the Federal Government proposed to introduce changes in the rebate regime which were protested by the Australian mining industry (American Metal Market, 1998).

Gold smuggling into Russia was reported to be an increasing threat to national jewelry manufacturers. Attempts have been made to smuggle into Russia large consignments of gold jewelry, mainly made in Turkey. Smugglers are attracted by the relatively low prices of low-quality Turkish gold and the profit that its sale in Russia may bring if customs payments are avoided (Platt's Metals Week, 1998d).

The Jinan Customs House, in eastern China's Shandong province, reported that it has seized about 128 kg of gold, the largest gold

smuggling haul in the People's Republic of China since it was founded 50 years ago. The 128 bars of 99.99 % gold bullion originated in Australia and Hong Kong (Platt's Metals Week, 1998b).

Zimbabwe's Athens gold mine in Mvuma, one of the oldest gold mines in the country, closed as a result of low gold prices. The Athens Mine is owned by Lonhro Zimbabwe. About 300 workers have been transferred to other Lonhro gold mines; few have been laid off (Platt's Metals Week, 1998e). In addition, Zimbabwe's Dalny gold mine in Chakari, one of the country's leading producers, has been closed as a result of low gold prices, unfavorable credit terms from local financial institutions, and poor ore grades. The Dalny Mine is owned by Falcon Gold Zimbabwe. About 550 workers were laid off, bringing the total to 1,150 workers who have lost their jobs at the mine (Platt's Metal Week, 1998c).

Update.—There was a decrease in gold business during January on the London bullion market. The average daily turnover declined to 1.2 million kg of gold, down about 14% from December. This figure represents about the same daily turnover as January 1997 (Metal Bulletin, 1998a).

The Bank of England reported that Central Banks hold more stocks of gold than they need because many of gold's traditional uses, including its role as a hedge against inflation, are being affected by current financial environmental changes: levels of inflation are lower, payment systems are more sophisticated, and fewer people pay in gold bonds (Platt's Metals Week, 1998a).

The World Gold Council reported that worldwide consumption of gold in 1997 was estimated at 2,935,000 kg, up 9% from 1996. Fourth quarter demand was up 5% to 754,000 kg, the highest quarter on record (CRU, 1998).

Silver

Sunshine Mining and Refining Co., Boise, ID, announced that in 1997 it had achieved its highest production levels since 1990. Silver production at the mine reached the 1997 target of 4.2 million ounces,

an increase of 65% over production in 1996. Company officials said that the Sunshine Mine is expected to produce 6 million ounces of silver in 1998, 42% more than in 1997. According to Sunshine officials, silver reserves at the Sunshine Mine increased 4.3 million ounces, to 40.6 million ounces at yearend 1997. These reserves are contained in 1.8 million tons of ore with an average grade of 22.3 ounces per ton. The Sunshine Mining and Refining Co. is one of the world's largest silver producers. It owns the Sunshine Mine in the Coeur d'Alene Mining District of northern Idaho and the Pirquitas Mine in northwest Argentina (Sunshine Mining and Refining Co., 1998).

New Printing Process Uses Silver-Coated Plates.—A new printing process that uses silver-coated plates offers high quality images with virtually no preparation time. In the new process, called zero-processing plate making, a digital image is projected by lasers directly onto a silver-coated plate. The laser beam heats the silver particles sufficiently to vaporize the organic matrix, allowing the silver to be vacuumed away and exposing a water-receptive layer which rejects printing ink. The plate is then placed directly into the printing press where it is inked for printing. The amount of silver used on this thermal-ablation plate is about 1 gram per square meter, versus 4 grams for photographic film. The useful life of these silver plates ranges from 0.5 million to more than 1 million impressions. Silver is the logical choice for this application because it results in a permanent image as fine as the focus of the laser. An important feature of the silver plate is its extraordinarily long shelf life (Silver News, 1998).

Platinum-Group Metals

All of Russia's Government ministries have agreed on quotas for Russian palladium and platinum exports for 1998 and are only awaiting the final approval of the country's Prime Minister, according to the head of the Finance Ministry's Precious Metals Department. There had been speculation as to whether Russia would stall on 1998 deliveries and freeze shipments in a repeat of events in early 1997. Delays in 1997 were attributed to a conflict between the head of the Finance Ministry and the Central Bank. The head of the precious metals section of the Finance Ministry stated in November that Almazjuvelirexport (Almaz), the state trading agency for PGM, had been granted a license that authorized Almaz to roll over 1997 contracts to the first quarter of 1998. Therefore, no delays should be expected (Platt's Metals Week, 1997). Meanwhile, little or no progress was made in efforts to agree on contracts for supplies of palladium from Russia to the major consumers in Japan. This

means that it now seems likely that, despite the announcement by the head of the Finance Ministry, a second year of disruptions to palladium supplies is likely. It had been hoped that some kind of order would be restored for 1998. However, it now appears that deliveries from Russia, which produces more than 50% of the world's palladium, are again in doubt (Metal Bulletin, 1997).

Record Production of Platinum and Palladium production at Stillwater in 1997.—Stillwater Mining Company achieved record-high levels of PGM production and sales in 1997. Stillwater's Montana mining operation posted full-year and fourth-quarter production of 8,400 and 2,500 kg of palladium and 2,600 and 778 kg of platinum, an increase from 6,100 and 1,840 kg of palladium and 1,840 and 560 kg of platinum, respectively, in the previous year. The increase was the result of an expansion program which allowed Stillwater to reach an ore throughput level of 2,000 tons per day in the fourth quarter (Metal Bulletin, 1998b).

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TABLE 1
MINE PRODUCTION OF RECOVERABLE GOLD AND SILVER IN THE UNITED STATES, BY STATE 1/

(Kilograms)

	Arizona	California	Montana	Nevada	Other States 2/	Total
Gold:						
1997: p/						
January	W	1,800	948	18,500	5,600	26,900
February	W	1,800	659	16,400	5,430	24,300
March	W	1,850	671	20,400	5,310	28,200
April	W	1,850	618	18,900	5,730	27,100
May	102	1,830	640	19,700	5,970	28,300
June	74	1,770	W	21,000	6,020	28,900
July	W	1,790	648	20,700	5,620	28,800
August	W	1,800	474	20,600	5,440	28,300
September	W	1,790	632	20,600	5,310	28,300
October	W	1,730	W	22,400	6,140	30,300
November	W	1,890	W	22,200	5,790 r/	29,800
December	W	1,770 r/	W	21,500	5,520 r/	28,800 r/
Jan.-Dec.	176	21,700 r/	5,290	243,000	67,900 r/	338,000 r/
1998:						
January	W	1,750	W	20,700	5,290	27,800
	Arizona	California	Nevada	South Dakota	Other States 3/	Total
Silver:						
1997: p/						
January	11,200	1,560	63,000	351	61,400 r/	138,000
February	10,300	1,530	44,700	436	61,600 r/	119,000
March	14,700	1,810	60,200	454	56,300 r/	133,000
April	12,600	2,110	56,500	401	62,500 r/	134,000
May	15,800	1,880	45,400	393	67,300 r/	131,000
June	14,600	1,720	58,800	432	61,400 r/	137,000
July	15,300	W	57,000	470	60,300 r/	133,000
August	16,700	W	64,600	438	62,300 r/	144,000
September	14,800	W	80,700	517	64,900 r/	161,000
October	14,200	W	70,700	402	61,600 r/	147,000
November	14,200	W	62,700	382	67,700 r/	145,000 r/
December r/	16,400	1,660	61,000	342	59,500 r/	139,000
Jan.-Dec.	171,000 r/	12,300 r/	725,000	5,020	687,000 r/	1,660,000 r/
1998:						
January	16,800	W	52,500	307	63,600	133,000

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Other States."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes Alaska, Colorado, Idaho, New Mexico, South Carolina, South Dakota, Utah, Wisconsin, and States indicated by symbol "W."

3/ Includes Alaska, Colorado, Michigan, Missouri, Montana, New Mexico, New York, South Carolina, South Dakota, Utah, Wisconsin, and States indicated by symbol "W."

TABLE 2
SELECTED PRECIOUS METAL PRICES

(Dollars per troy ounce)

	Gold	Silver	Platinum	Palladium
Engelhard Industries:				
1997:				
December:				
Low/date	284.13/12	5.20/1	345.00/16	186.00
High/date	297.85/24	6.20/29	391.00/3	216.00
Average	290.28	5.74	369.09	203.04
Year to date:				
Low/date	298.15 (Nov. 26)	4.22 (July 8)	345.00 (Dec. 16)	177.00
High/date	367.82 (Jan. 1)	6.20 (Dec. 29)	490.00 (June 6 & 9)	246.00
Average	333.40	4.90	396.58	184.14
1998:				
January:				
Low/date	279.82/9	5.48/12	363.00/13	205.00
High/date	306.02/30	6.28/30	394.00/29	245.00
Average	290.58	5.85	377.15	229.55
February:				
Low/date	292.55/24	6.15/25	376.00/24	232.00/27
High/date	302.66/2	7.31/5	405.00/5	246.00/25
Average	298.61	6.74	389.75	239.75
Year to date:				
Low/date	279.82 (Jan. 9)	5.48/12	363.00/13	205.00
High/date	306.02 (Jan. 30)	7.25/6	405.03/5	246.00
Average	294.61	6.30	383.45	234.65
Handy and Harman:				
1997:				
December	288.65	5.71	XX	XX
Average	331.16	4.89	XX	XX
1998:				
January	289.18	5.84	XX	XX
February	297.49	6.72	XX	XX
Average	293.32	6.28	XX	XX
London Final:				
1997:				
December	306.03	5.07	XX	XX
Average	331.15	4.90	XX	XX
1998:				
January	289.09	5.87	XX	XX
February	297.49	6.83	XX	XX
Average	293.29	6.35	XX	XX
XX Not applicable.				

Source: Platt's Metals Week.

TABLE 3
U.S. IMPORTS AND EXPORTS OF GOLD, BY COUNTRY 1/

(Kilograms of gold content, unless otherwise specified)

Country	Ores and concentrates 2/	Dore and precipitates	Refined bullion 3/	Total	Waste and scrap 4/ (gross weight)
Imports for consumption:					
1996	3,460	11,900	143,000	159,000	13,000
1997:					
October	4	1,260	9,690	11,000	1,200
November	4	1,260	9,690	11,000	1,200
December:					
Brazil	--	--	2,870	2,870	--
Canada	(5/)	--	8,270	8,270	747
Chile	10	--	400	410	6
Colombia	--	--	163	163	28
Dominican Republic	--	--	2	2	880
Korea, Republic of	--	--	911	911	115
Mexico	176	783	160	1,120	351
Peru	--	--	697	697	16
Switzerland	--	--	1,530	1,530	--
Other	--	9	1,420	1,430	344
Total	187	792	16,400	17,400	2,490
Year to date	1,710	13,700	194,000	209,000	14,100
Exports:					
1996	374	65,100	406,000	471,000	89,900
1997:					
October	56	8,730	16,300	25,100	5,670
November	59	6,900	17,100	24,100	6,050
December:					
Canada	--	411	7,860	8,270	2,400
France	--	--	--	--	1,490
Germany	1	--	602	603	165
Hong Kong	--	--	6,450	6,450	--
Korea, Republic of	--	--	211	211	--
Mexico	--	--	2,360	2,360	--
Switzerland	--	5,780	512	6,290	--
United Kingdom	--	2,640	6,110	8,750	536
Other	--	43	1,150	1,190	239
Total	1	8,870	25,200	34,100	4,830
Year to date	427	85,300	391,000	476,000	60,500

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes gold content of base metal ores, concentrates, and matte imported for refining.

3/ Bullion also moves in both directions between U.S. markets and foreign stocks on deposit in the Federal Reserve Bank. Monetary gold excluded.

4/ "Waste and scrap" not included in "Total."

5/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 4
U.S. IMPORTS AND EXPORTS OF SILVER, BY COUNTRY 1/

(Kilograms of silver content, unless otherwise specified)

Country	Ores and concentrates 2/	Dore and precipitates	Refined bullion	Total	Waste and scrap 3/ (gross weight)
Imports for consumption:					
1996	153,000	281,000	2,580,000	3,010,000	1,810,000
1997:					
October	432	22,100	134,000	156,000	123,000
November	--	12,600	195,000	208,000	78,700
December:					
Canada	55	1	111,000	111,000	39,000
Chile	43	17,900	4,700	22,600	--
Germany	--	--	--	--	19,100
Malaysia	--	--	--	--	18,500
Mexico	27,800	695	99,400	128,000	13,300
Peru	--	--	27,900	27,900	18
Philippines	--	--	--	--	17,800
Portugal	--	--	--	--	18,900
South Africa	--	--	--	--	8,000
United Kingdom	--	--	--	--	150,000
Other	--	532	56	588	1,390
Total	27,900	19,100	243,000	290,000	286,000
Year to date	141,000	285,000	2,120,000	2,540,000	1,530,000
Exports:					
1996	1,520 r/	43,300	2,900,000	2,950,000	1,280,000
1997:					
October	720	3,290	111,000	115,000	96,300
November	250	3,980	194,000	198,000	102,000
December:					
Belgium	--	--	--	--	6,550
Canada	--	--	350	350	38,600
China	--	1,510	--	1,510	6,060
Germany	--	--	--	--	10,200
Hong Kong	--	--	6,000	6,000	119
India	--	--	--	--	192
Italy	--	--	--	--	291
Japan	--	--	38,000	38,000	18,500
Sweden	--	--	--	--	2,460
Taiwan	--	2,500	--	2,500	--
United Kingdom	4,430	127	532,000	537,000	5,280
Uruguay	--	--	2,260	2,260	--
Other	390	57	57	504	377
Total	4,820	4,200	579,000	588,000	88,700
Year to date	35,000	65,500	2,980,000	3,080,000	1,020,000

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes silver content of base metal ores, concentrates, and matte imported for refining.

3/ "Waste and scrap" not included in "Total."

Source: Bureau of the Census.

TABLE 5
U.S. IMPORTS AND EXPORTS OF PLATINUM-GROUP METALS, BY COUNTRY 1/

(Kilograms of metal content, unless otherwise specified)

Country	Ores and concentrates	Waste and scrap (gross weight)	Refined				Osmium	Ruthenium
			Platinum	Palladium	Rhodium	Iridium		
Imports for consumption:								
1996	1,960	5,060	73,700 2/	146,000	9,650	1,810	329	15,600
1997:								
October	--	633	7,140	16,000	1,240	161	--	774
November	--	394	7,300	17,600	936	161	--	526
December:								
Australia	--	--	353	--	--	--	--	--
Belgium	--	--	119	1,220	--	--	--	--
Canada	--	--	85	255	--	--	--	--
France	--	--	--	--	--	--	--	--
Germany	--	25	180	476	6	1	--	--
Italy	--	--	--	157	--	--	--	--
Japan	--	--	--	536	--	--	--	--
Netherlands	--	--	--	--	45	--	--	--
Norway	--	--	--	578	--	--	--	--
Russia	--	--	257	22,100	620	198	--	149
South Africa	--	11	4,330	2,530	449	38	--	512
Switzerland	--	140	144	477	143	--	--	31
United Kingdom	--	87	714	324	75	94	--	92
Other	--	94	427	436	--	--	--	--
Total	--	357	6,260	29,100	1,340	331	--	784
Year to date	--	5,310	76,000	148,000	14,400	1,860	54	11,500
Exports:								
1996	484	8,640	12,700	26,700	196	123 3/		
1997:								
October	2	943	1,220	3,490	13	35 3/		
November	136	1,020	849	2,530	26	18 3/		
December:								
Australia	--	--	189	--	--	--		
Belgium	--	9	--	1,300	--	--		
Canada	--	--	31	83	--	--		
France	--	--	42	40	--	--		
Germany	6	124	40	182	--	1 3/		
Ireland	--	--	197	42	29	--		
Italy	--	5	100	649	--	--		
Japan	--	98	978	44	--	--		
Korea, Republic of	--	--	333	422	4	--		
Mexico	--	--	4	897	--	1 3/		
Netherlands	--	--	14	183	--	--		
Switzerland	--	--	9	37	--	--		
Taiwan	--	--	10	267	--	--		
United Kingdom	--	517	297	85	--	--		
Other	3	--	195	96	60	--		
Total	9	758	2,380	4,330	98	2 3/		
Year to date	693	12,900	23,000	43,800	284	572 3/		

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Of this amount, 1,258 kilograms was in the form of platinum coins.

3/ Includes osmium and ruthenium.

Source: Bureau of the Census.